Notebook, N-89-00-00.1

This undated notebook was used by Edison, possibly in 1889. It contains drawings of lamps and filaments, calculations of costs for ore milling, drawings of ore separators, lists of compounds derived from a multi-volume work on chemistry, and other drawings and calculations. Although part of the N-series, it is not a standard-size notebook but is physically identical to PN-87-05-08. The front cover is stamped "Note Book." The book contains 123 numbered pages; the entries run from the back to the front of the book.

This book has been filmed at a reduction ratio of 15:1.

Acrolein Ammonia – solid Compound
action KH on acrolein – amorphous;
Turns brown at gentle heat,
decomp at 100° Vol 1 p 57 –

Allantoic acid Vol 1 p 132,
Allophanate of Glycerylp. Vol 1 134
Residue (black glutinous) heat on Oil Garlic
Vol 1 p 143
Aloretic acid Vol 1 p 148
Black pitchy Mass action SO_4 on Amyl alcohol
Vol 1 204
Anchusin – Vol 1 p 290,
Melanisic acid – p 298 Vol 1
Nitrianisic acid Vol 1 302
Anisuhmi – Vol 1 306,
Black pitchy Mass, action Pent of Phos. on Hydride
of Anisyl. Vol 1 307
Annatto Vol 1 307-8.
Arctuvin Vol 1 356 –
Aricino Sulphate Vol 1 357

N-(89-00-01)

Camphor — Aurade Nerol Camamorp Vol 1 476

Black Resin action Chromic acid on Benzoic
Vol 1 526,

Action of Pal chlorite KMnO4 on Benzoic a
Vol 1 555

Benzoic Camp ~~Coids~~ — Melts 206 C Vol 581

Hexaglycerin Bromohydrin - black cryst
Compound Vol 1 665 See ethal entrals,

Bromodoform — p 680 Vol 1

Bromoform - Solvt - Vol 1 680

Pitchy Mass — Brunolic acid Vol 1 684

Camphoreain Vol 1 730

Caramel Compounds Vol 1 747-8

Caryophyllin ~~Vol~~ Camphor like -
Vol 1 809

Chelidonic acid - Vol 1 847 -

Chelidonate ammonia — 1 848

Chinolin - see Diamphins Vol 1 870
also chinoline violet sto p 873
p 920 - 14th line from bottom
Chlorophyll - infusible - p 922. Vol 1
see Erythrophyll - same article,
Cholophaein - infus - p 928 Vol 1
Cholochlorin do
Cholocoïdanic acid - 929
Chrysaminic acid - diamphins
p 956 Vol 1
Chrysanisic acid - boiling in KO
black 526 - p 957 - Vol 1
Cinchonia Red 969 - Vol 1
Dibromocinchonine - p 978 Vol 1
Citrin for Salut, p 1001. Vol 1

Monocitromannitan, Vol 1 1002

Oil Lemon for Aylesworth,

See Separation by KO of brown sub from Oil Lemon 1004 Vol 1

Cincin - p 1029 vol 1

Oxalate Codeine, 1066 vol 1
Tribromocodeine, 1067. Vol 1

Comenic acid - 1103-4
acid C & ammonia - 1104 -

Convalvulin - Vol 2 15 -
Copaiba - action Iodine - p 16 Vol 2

oxycopaivic acid - pitch & humus
Val 2 18.

Camphor paroufine salut Copal -
Val 2 : 20.

Coriander oil - Val 2 84

Apocrenic acid Val 2 103

Saponifen Croton oil black Resin Val 2
p 112

Crotonol - Val 2 113

Curarine - Val 2 185 -

Cyanide Ammonia changes into Brown
sub - Azulmic a Val 2 203.

HCy – Dizamplw Val 2 218,
Cyanogen Sulphydrate – Cloche
sub etc – Val 2 285 –
Dolicoa – Cannabina Val 2 306
Doppelerite – potash – Val 2 345 –
Dragon Blood – 345 – Val 2
Dulcite = ammonia Salt DWM
Val 2 350 –
Elaterin – Val 2 373
Elemi – Cryolg Resin DWM Val
2 483
Ellagic acid DWM 2 484

~~Chlorethyl dow Cyclog~~
Ayleworth, Val 2 530 - acheu
Chlorine and Chlorethyl C -

Dibromomethylene - Val 2 570
Ayleworth - Dichlorethylene
Val 2 573 -
Eucalyn - 2 601
Flavine 656 - Val 2
Fumaremede Val 2 746.
Gallica - Val 2 760
Gallotannica - 2 766

Gentianic a – 2 830
Geocerie acid 831 – 2
Glucio r apophicic 2 848
Glucose 859 antich 6 & 10 17.22
glyceric anhydride – 876
2 mohr down –
see p 880 mch from bottom
glycerin dissolves in chloroform
action ChlZn p 898 middle page.
glycocine p 903 action chloroform
Vol 2

Chromate of Glucose 2 904

graphitic acid - 2 948 —
see Cowarth also

Dilituric acid 2 965 —

Haemaphein - BWM - Vol 3 p 1
Haematein " "

Amido-hippuric acid vol 3 160

Horny tissue action Chlorine Vol 3 171

Humopic acid vol 3. 175

Brown mass into Ulmic a - Hydroquinone action
NH + KO Vol 3 213 See also Decomposition

Brown sub - action NH on Carbohydroquinonic
acid - Vol 3 215

Didlorinated Hydroquinone - action NSA
Vol 3 216. also Trichlid.:
Hypogallic a Vol 3 239 —
Imasatin Vol 3 245 —
Indefuscin DWM - Vol 3 249
Indigo blue - Descriptive Vol 3 253
Sulphindigotic acid - Descriptive
Vol 3 259
Sulphindigotate Ammonium - DWM
Vol 3 260
Indehumin - Vol 3 p 264
Hydroindin DWM - Vol 3 266
Iodoform Descriptive Vol 3 311

Isonaphthin - Val 3 313
Isatin - Decomptes Val 3 407
Isatyde - 3 - 411
Phenylglaconamic acid - Val 3. 736
Jalapin Decomptes p 439 Val 3
Japonic acid 3 - 442
Lactic acid Decomp - humus Val 3 457
Legumin - Decomptes. Val 3 569
Leucine - action Chlorine - 3 - 571
Linseed oil - action phosphorus 3 - 703
Luteolin - Decomp 3 736

Melanic acid good Val 3 867 ~~867~~
see also action ammonia on Quinone

Melassic acid - 3 868

Melbulmic acid 3 984

Action NaO on Methyl-blood sub - 3 989

Milk Sugar Description 3 1023

Morinlannic acid 9th line bottom
Val 3 1049

Sulphomorphide - 3 1055

Hydriodate of Ethyl-morphine
Val 3 1056

Mucamide 3 1057

Mucate Methyl 3 1059

Muriatic
~~Acetic~~ boiling P – 3 1062
Naphthalin 4 19
action NO_3 on Naphthyl-diamine
4 23
Menaphthylamine bromine 4 24
Nitric acid - good – 4 48
Acetylene – 4 172
Menthol. Decomp – 4 175
See Orb Volatile Reactions 4 190
Olivil decomp 4 200

Orcin - acetic acid chromic KO - 4 213
Tribromorcin 4 214
Tri-iodorcin - 4 214
Oxanilene - 4 287
Oxynaphthylcamino Dzam
4 314 -
Pectic acid Dzcrupton 4 367
see salts.

Phenicane acetic NO_3 4 388
Nitrophenic acid - 4 394
Picramic acid - Dzcrupton 4 406
Picramate NH_4 - 4 407

Tarry residue - phenyl Sulphide -
vol 4 447 -
action NO_2 on aniline bottom 4 422
" Chlorine on aniline bottom 4 422

Tetrachl Carbon + aniline - 4 425 -
See 30 - p 426 - vol 4
Sulphate aniline Sal water, 428
Sulphate of Chloraniline - 440
Cyanilide - 441-2
Dicyanomelaniline Dwm 4 464

Try Camphor with aniline -
stop Carbon ~~[illegible]~~
Chloroform etc

Phloramine · Decomp 4 488

Nitrophlorelin DWM 4 492

Melaphlorelin — "

Phloroglucin - Reaction 4 494

Phlorone - 4 496

Humus bodies acid phos on

Carb Soda — 506 4 See chalcanbeth

Physalin - 4 634

Picrotoxin DWM 4 643

Pinepicrin — 4 651

Piperic acid action Hydroxide a
val 4 654.

Pittacal – 660 –

Potato fat DWM 4 723

Pyrodextrin 4 758.
appears some that nitration
for my purposes should be with
100 cc acid instead of
strong acid reserve for the
blade and more research –

Pyrogallic a – 758 9

Pyrolartrimide
allocks & gelanty paper
4 775

Pyroxanthin acetan Chlor
4 – 776

Pyrrhoretin. 4 783

Pyrrol Red 4 784

Quinine DWM. 5 – 17

Quinone – Reactions good –
vol V 27

Quinoylic DWM - 5 34
Racemocarbonic acid —
properties, 5 40
Roosolic acid - 5 117
Rubian DWM - 5 123
Rubinic acid - 5 132
Rufigallic acid — 5 133
Saccharic acid - 5 143
Salicin DWM - 5 148
Healing Indigo — See Salicylic a
5 152

Salicylic Chlorhydrate —
5 — 161

Methyl-Dinitrosalicylic acid —
5 — 164

Bromonaphosalicylol —
5 — 172

Salicylurie acid Dum
5 — 172

Saponin Dum — 5 — 194

Sarcine Dum 5 — 196

Sarcocolin Dum 5 — 197

Acetum SOy Sassafras Oil 5- 199

Sassaurubin - 5- 200

Try Shellac in Reg — see 5- 239

Silk - 5- 276

Acetum Bromine a Sleave a

5- 416

Sugar or Hty 5- 467.

do p 471 -

Dibromonaphthalin a

5- 479

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Acetum SOy Sassafras Oil 5- 199

Sassaurubin - 5- 200

Try Shellac in Reg — see 5- 239

Silk - 5- 276

Acetum Bromine a Sleave a

5- 416

Sugar or Hty 5- 467.

do p 471 -

Dibromonaphthalin a

5- 479

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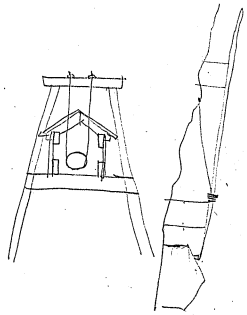


Amidosulphobenzoic acid
DWM 485 5-

Ethyl Sulphobenzoate DWM
5- 488

Oil Mustard 5-516

Methyl Sulphocyanate 5-520

Sulpholignic acid 5-522

Sulphosuccinic acid DWM 527

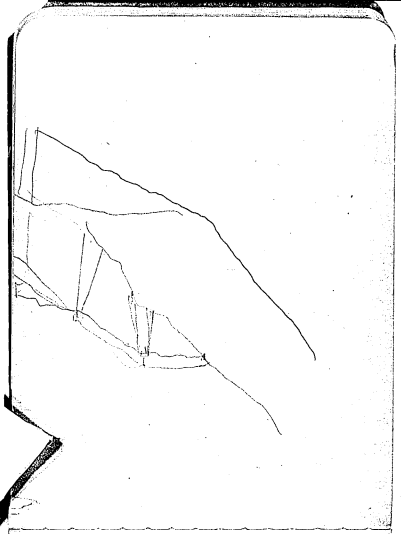
Naphthylsulphurous acid
5-580

Naphthylthionamic acid
5-562

Amyl Sulphate ammonia
5-620.

Sycoretin, 5-647
Tannaspidic acid
5-659
Tannoxylic acid-661
Terephthalic acid not sol
Sublim without fusion
Chloro made by oxdn
Impure ord by HNO_3

Thiamsonic acid 5-774
Thiet-sic-775



Thiomelanic acid 778
Thiosinamine - 781
Thujin - 790
Toluidine - 1 opposite 866. 5
Benzyl - acid. Na - 870
Isonitrobenzyl - ~~[illegible]~~ bottom line 870
Bromobenzyl - DWM 871
Mauveine ~~[illegible]~~ Polyleno Th
Val 5 - 873
Trigenic acid - 884

(47)

Tyrosine 932
Amydalyrosine DWM 933
Erythrosin -935-
Ulmos sublein - 936
Uramilic acid DWM 940
Usnic acid sodium alkalis - 970
Valylene - 983 & 2
Veratrin 995-
Violantin 1000 1001
Viscin - dry distn asphaltic residue
1003

Phono-Cylindus Wrating
1007 - vals - Vilcanydum
+ filb -

Jugglandin 1008

Cinaephone - good. 1048 V
Cinaephane - " 1048

Xanthine DWM - 1051 V

Xanthoprotocic acid DWM 1053

Xanthorhamnin - 1053

Xenglamine Derivatives of Phenolic Compounds
p 1055 V

(51)

70 | 15600 (222
140
1560
140
20

8

35 | 2800
35

10
310

Xylocodein — see adm barly Ba_2O_3
See Salmalbin Xyloidin —

paper fil salmalbid with Chl Z
then dried & gradually chgd at to
get change it by chgn —

Corcamyrtin . 1090 — s

β-Dinitro-anthraquinone — 1st pt 3rd
Sep — p 99

Azobenzene action $SbCl_3$ tri = 1st pt 3rds
p 212

Metaamidobenzenesulphonic acid
DWM — 227 1st pt 3rds

15
15
75
15
225

361 / 275 = 136 —

86 —

19
19
171
19
361 / 19 = 19.
171

275 deg fahr. 19 amp

19 / 275 = 14.2 deg to amp
19
85
76
50

275 / 361 = 1.3
275
860
825
350

361 Hunit.

11 amp

1.3 H U to deg fahr

136 —

144 —
11
13

11
11
11
121
363

31 / 275 = 8
248
84

275
84
191.

Diamidobenzenesulphonic acid
228 1st 3rd Sup — DWM

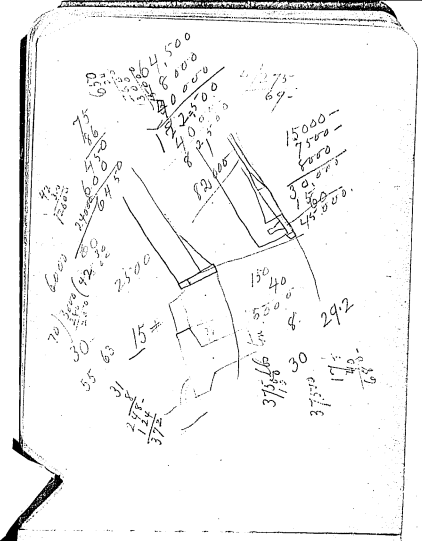
Dibromomelamidobenzenesulphonic acid — DWM 232 — 3rd sp 1st pt, DWM

Amidoparadibromobenzenesulphonic acid
233 — 1st pt 3rd sup — DWM

Tribromamidobenzenesulphonic
233 1st pt 3rd sup DWM

~~Tribro Tribromam~~

Tribromomelamidobenzensulphonic acid — DWM — 234 — 1st pt 3rd Sup



Tribromomelamidobenzenesulphonacid
3 — 234 - 1st pt 3rd Sup Dwm

Tetra-succ - Dwm - 234 1st pt 3rd

See Amide - middle p 241. 1st pt 3rd
Dwm —

See amide. 243-4 Dwm 1st pt 3rd
+ 3 —

" middle page 244 - the ~~[illegible]~~

Nitrodibromo ben sulc a — Dwm.
245 — 1st pt 3rd Sup

See amide + chlorides 3 methods Dwm
p 248 - 1st pt 3rd sup

See p 257 - 1st 3rd sup

Thiocarbamidobenzoic acid
DWM - 269 - 1st pt 3rd Sup

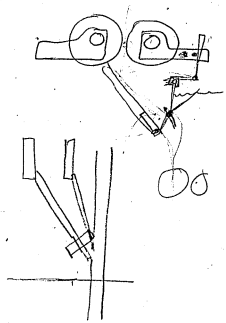
Thiocarbamidobenzoic acid
DWM - insol in Alc and solvents
p 269 - 3rd Supt. pt 1

Ortho Azoxybenzoic acid - 277
DWM - 3rd Sup 1st pt

See top p 278 - 3rd Sup 1st

Monomethodiazoxybenzoic a
DWM - 278 - 3rd Sup 1st

Condensation products of Gallic a - 293 3rd Sup
See 2nd Line above Benzoyl-demethylgallic
p 312 1st pt 3rd



Naphthyl-Thiocarbamide —
398 — 1st pt 3rd

Carbon monosulphide — 406 —
1st pt — 3rd DUM — at 200 C

Catechin — 416 — 1st pt 3rd

action ammonsulphide on Chloral hy
441 — 1st pt 3rd 5th see K 6
action Kt 105 ℗ —

action Na on Chlorofm — 450 3rd 1st

Tetranitrochrysene — 465 — 3rd 1st

See Dryoctin — 469 — 3rd 1st
℗2

See action Nitric a on Chrysoidine
℗5 =
also Chrysoidines alphanic a —
DUM 469-70 (61)

36" to 14

14 to 7

7 to 3

3 " 2

~~2 to 1/4~~

1/4 x 84

14 to 50

22

25
45
65
70
30
50
60

10
5
8
15
20

7 | 345

22 40 | 2100 | 492

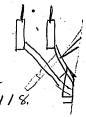
224000

4480

5,7240000

33000 | 236,200,000

33000 | 198000



200000 | 236 200 000 | 118.

200 000

36 2000

200000

1620000

16

175 =

480

480
3000
3000
3000
3000
3000
1980

20000 | 240
40000

Cinchonine =
Monoacetylcinchonine DCUM
463 – 3rd 1st

Cinchoneine = 487 – 3rd 1st

P – 5 – p 490 – 3rd 1st

Cyanamide – good See P 5
p – 598 – 3rd 1st

Aconic acid 641 – 3rd 1st

Digallic acid 646

Benzidine – bottom P = p 661 3rd

a-Diphenol – P – p 664 "

Diphenyl-dicarbonic acid DCUM
668 – 3rd 1st

Fluorene – with hydrochl. – 672

Nitro deriv. of chlorbenz 677

Echecoutchin – mix for pilo – ? –
689 – 3rd 1st.

Dyes from phenol – 697

Sulphonated Dyes 698 – 9

Toluidine salts at anode Brom Sub –
Sal Al – 710 3rd 1st phenol yields
Brom sub – see cocoate article

Sodium Ethylate – hummbodes 749
3rd pt

Ethyl-oxyoxalyl Chloride –
759 —

Action Br on Eugenol 762 3rd, 1st
Ethyl Eugenol - 763

Oxidation Fluoranthene 793

See Reactions then with Furfural;
833 3rd 1st

Acetyl Furfurane - 837

Action Nitric a on furfurane 837

Reactions - p 23 1st sup also
action Iodine -

Acetylenic acid 29 1st sup

Acetylene - 32 - 1st Aylesworth
& for its - good article great
stuff - Famous Carbon p 33

(67)

Aldehyde on Cyanamide 1st sp 73
Acrolein SO4 Diallyl. 92 1st
Br compounds of allylene 96 – 1st
Amylalcohol dutten foot p 108 1st
Bromanylene Dibromide DCVIII.
120 1st
Acrolein 171 – 1st.
Fritzsche's Reagent
Dendro-anthraquinone } 180 1st
Atropin – 250 1st
Avornin – 251 1st
Benthalats Bitumone – 261 – 1st
Stamp of Begni –
(69)

Dichlorobenzene sulphuric acid
DWM Red Roof 275 1st

Toluidine-sulphuric – 288 – 1st

Benzerythrene funny stuff –
p 304 1st

Thiobenzoic acid – DWM – 324 1st

Try Sipyan again with Camphor
or dilute dilutants in the Sul
+ pent class in benzene –

Dicomp Di + Tri-benzylamin –
337-8 1st

Betaine = 340-1 1st

Bitumene – 349 – Berchelots –
1st = may be the allanite from
Cannobville Coal.

Bixin = 350 – 1 1st

Camphor Resin – 388 1st
Camphronic acid – 390 p

Caramel – 396 1st

Carbohydroquinone acid
DOUM – 399 1st

Ø 3 – p 409 1st

Carbon Sesquisulphide good
– 410 – 1st

Catechin – 416 – Catechu acids
Cathartic a – 417

Fulminoïc 419 — 1st
Chelidonic a — 421 1st

Chenaline sul acid — 430 1st
Cinchona Red — 462 1st
Colophonen hydrate =
" dim Bor = 482 1st

Grahamite = good — 653 1st
Helleborin = 695 1st

Hydrazo-aniline — P — see Nitroaniline
" Hacmalgen 703 1st
Isalochlorin DCUM 758 1st
Isodeoxystannic acid DCUM 759 1st
Lanthopine DCUM 774 1st.
Lydine — p 793 1st

Sulphomalic a — 799 800 —
1st

Oxynaphthal good — 857 1st —
Phenol — 906 1st Reactions

Last 8 lines p 920 1st —
Dibromophenylene-diamine
DZOM — 923 1st

Beyond this in 1st sup not
marked — 2nd sup not
marked at all

Boil very finely divided Cannelvill Coal
with linseed oil,
Try Iodine — Chloroform & other
Solvents &

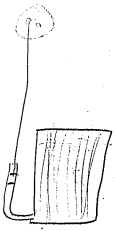
(77)

get Gilsonite - + all kinds
Asphalts -
Try 100cc on Coal + Wood tars
Wood Tar pitch = also Rockfly
Residue = previously had acid to
slimy = also on Stearic acid pitch,
100cc on Crude Petroleum -

Dry distillation in ChlZnc Sol.

Dammar - + other Resins -
Rockfly Residue ..
Sugar
Syrian -
Dextrin,
Rosin -
Balsam Copaiba -
Black Ozocerite,
Get small glass bent tubes like retorts
made by Gos r - Try all organic Wrecks
& cuts for black residues + powder
+ by solvents -

(79)

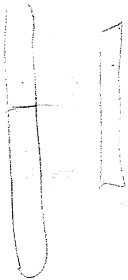


100 — 62 2"

10 —

9½

90 —



2000

500 – 900.

2000 –

2 –

100 –

100

200 –

100

(3)

(58)

2240
448 2
11 2 0
11) 56 9 (50.9
55 11
1 00 5 09
5 09
5 5 9

509 lbs hour

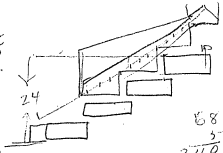
60
400
24000

509) 24000 (47 holes
2036
3643
3 5 6 3

9 inches apart 36
12
72
36
43 2

47) 432 (9.
423
90

398
195.0



36) 6.

.12

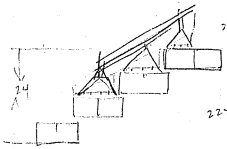
6 min
24000

24
6
4400
3440
960

2240)

68
3
340
12 15
1.23 125
90
215
30000
72000

3000
2240) 180000 (



500
6
3000
60 (84
2240) 180000
179200
1600

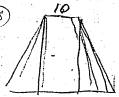
17000
20
340000

300

64000 80

400 x 400

(20)



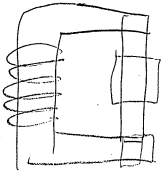
16

1600
300

27 | 480,000 | 17777
27
210
189
210
133310
30

400
400
160000
80000
160000
240000

2240 | 4400000 | 1642800
3400
9600
8960
6400
4480
19200
17920
2800

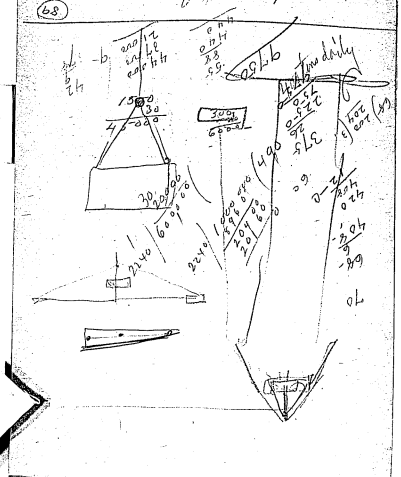


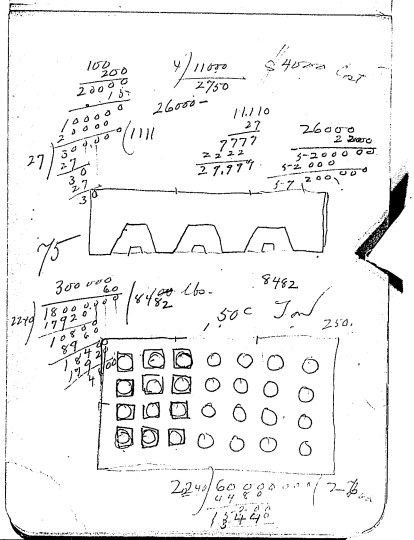
212 = 400

5500
600
10000
16100

64000 lin ft / 5000 for pound 400 x 400

(68)





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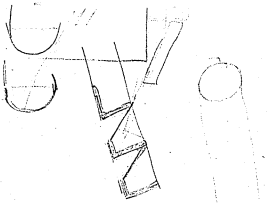


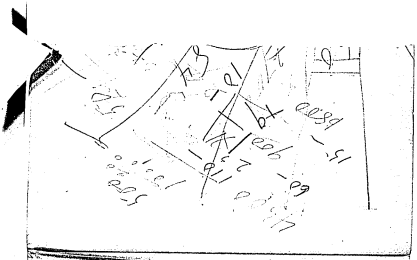
13 Cubic Spec-g .80 to 1.046

100 grams weight varied from

52.8 to 67.2 Cubic Centimeters

320	9 1/2
253	9
230	8 1/2
180	
123 —	7
88 —	5 1/2
	4 1/2
	4

225
185
125
45
38
31
28



Sulphate		Sulphide	
SO4 Calcium	3184	Calcium	896
Mn SO4	2499	Iron	444
Ferrous	2356	Ferrous	238
Ferric	6184	Cobalt	197
Cobalt	2305	Ni	175
Ni	2294	Zinc	396
Zinc	2300	Cu	183
Cadmium	2212	Pb	183
Cu	1826		
Pb	2162		

NaS 500 — layers
NaII 900 "
13
69
117
78
69 —

901 —

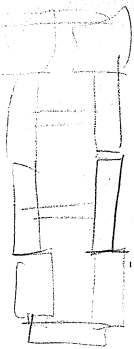
145 | 2000 (13.
145
2.00

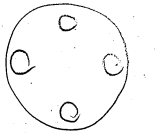
145 | 10000
870
8 | 1900
1160
1000

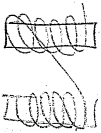
69-NH 50 —
NaS
10 layers

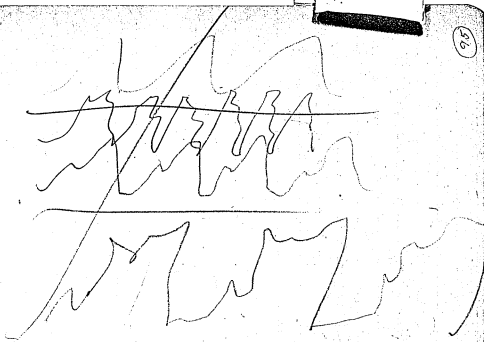
69 | 200 | 10 000 (50

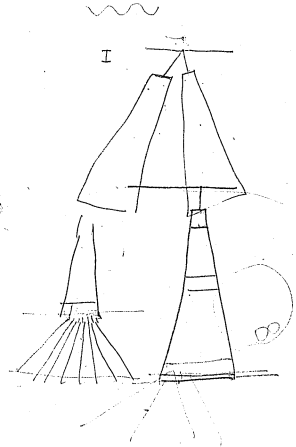
200 | 2000. (10 —
(93)











Fe
Mn
Co
Zn
Ni
Cd
Pb
Cu

15/4500 (3

8½ =

15 —

7½ x

19 =

45 —

45 —

15

50
15
65

40 —

80 —
32
48

*

29

100 —

150
65
85 +

70
10
60 —

225
200
45000

15 +

15 —

11

75
30
55
750
125

Holland —
Central ...
Vinyo...

7500
2750
4750

500
900 — 12 amp 60 volt.

60/900 (15 ft to volt.
600
3000
300

15/500 (33.
45
50

15
33
45
45
495 —

5.5 —

1

20% more 33 Volt.
16.5 volts —

99.0

20000 —

24
44
96
96
1056 —
99
9504
9504
0.41544

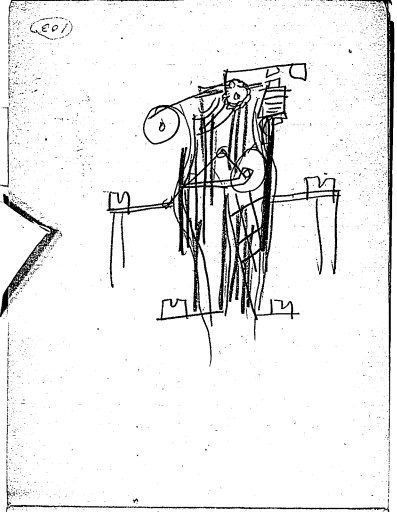
300 mi —
8
2400.

200 ft min —

4.5

20
8
22 160 —

0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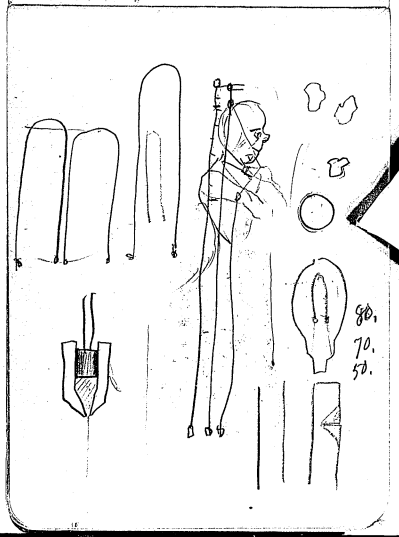
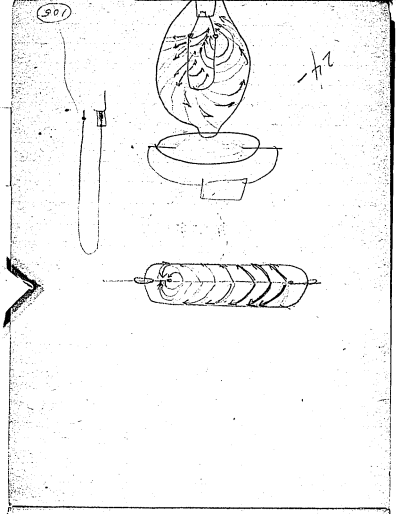

90.
70.
50.



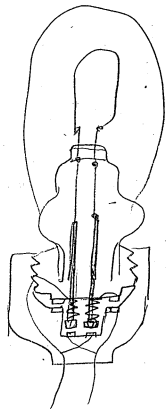
8 9- 27.

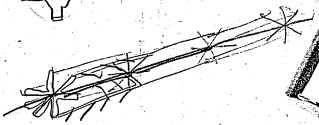
78
81
75
624
631 4

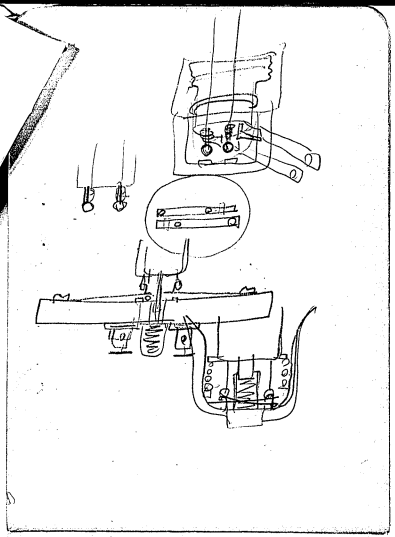
9

63

7. 3. 9
78
70
722 8







475. inches for 100 needles

1728 | 172500 (18 — 1/2
13824
4260
3456
804

60
28500

460
82
9200
3680
37720

1728 | 112 28

28 —
40
1120 —
5
500 —

37800
7560

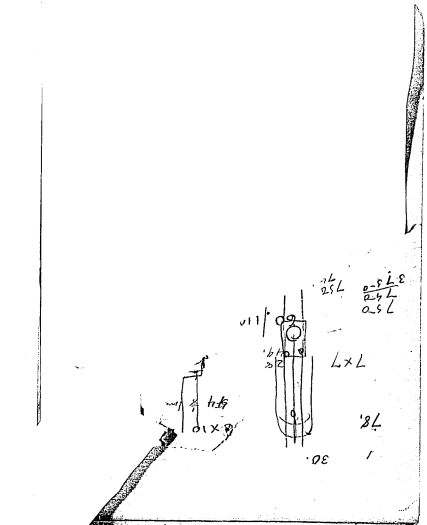
6 sq. inches per 20 hours

12 — 1
24 4 6
48 20 16 360 (18 per 20 h
56 44 20 / 16

450000 | 7560000 (1

60

24
18
192



10 lb 6 Hp

1 lb

1.20 20,000.= 5

3 HP 10

10 lb

20,000

60

(231

(5200) 1200.00
1040.00
1600.00
1560.00
4000

1	1
2	4
4	16
8	64
16	256
32	1024

3-

100-

4000-

75 slip loss

Photoret lb

Photoret

Photoret

Photoret

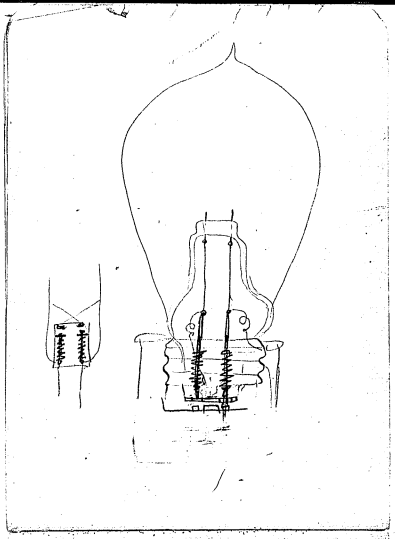
Photoret

Photoret

Photoret

2560 (100 H min

(113)



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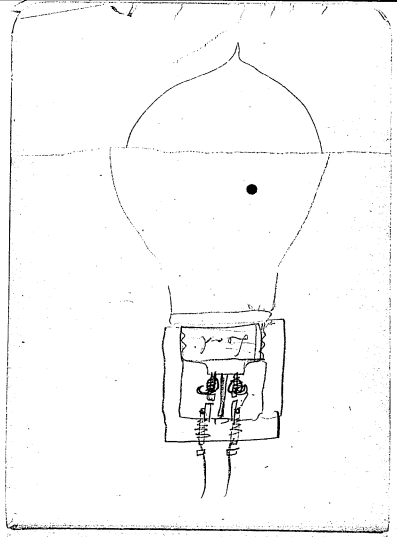

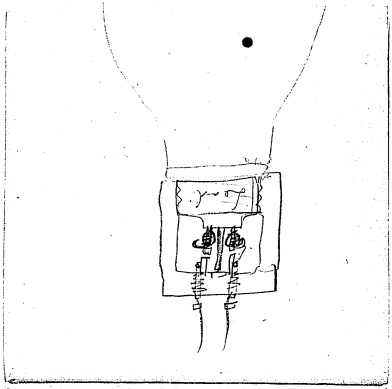

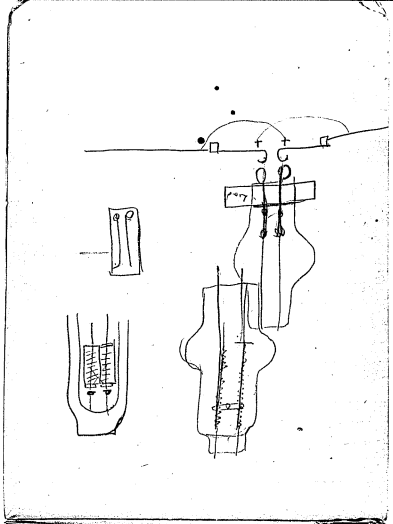

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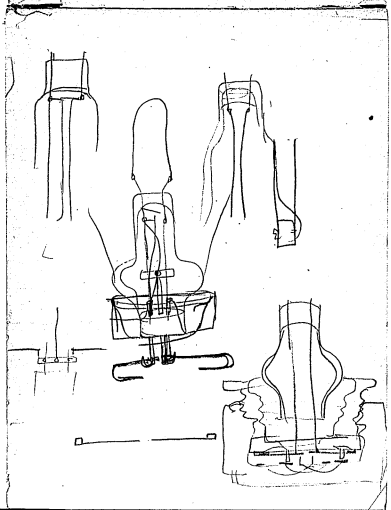

Salicylide $C_7H_4O_2$
Salicylic acid $C_7H_6O_3$

80
100
115
295

295
60
235.